

Claims

- [c1] A vertical rotary parking system in which hanger support plates are fixed to a suspension chain circulating along an endless track and support hangers with palettes on which vehicles are loaded, and the hangers are circulated by a driving unit, the driving unit comprising:
- a frame;
 - a driving motor which is fixed to the frame and generates power;
 - chain guide rails which are supported by the frame and guide the suspension chain;
 - an annular rotating body which is supported by a support unit such as to be rotated with respect to the frame, has an inner circumference on which an inscribed gear is formed, and includes at least two pull blocks;
 - a pinion which interlocks the inscribed gear and is rotated by the power of the driving motor;
 - and a coupling portion which is formed on the hanger support plate and combines with the pull blocks so that the pull blocks can slip onto or out of the hanger support plate.
- [c2] The vertical rotary parking system of claim 1, wherein

the support unit includes an annular fixing body which is fixed to the frame and has an inner circumference with which the annular rotating body is rotatably combined.

[c3] The vertical rotary parking system of claim 1, wherein the support unit includes a plurality of guide rollers rotatably installed on the frame such as to be arranged in a circle, and an annular rib which is formed on the edge of the inner circumference of the annular rotating body and guided to the guide rollers.

[c4] The vertical rotary parking system of any of claims 1 through 3, wherein the coupling unit is constituted with a pair of dogs which are separated from each other by a distance corresponding to the width of each of the pull blocks and protrude from the upper surface of the hanger support plate.

[c5] The vertical rotary parking system of any of claims 1 through 3, wherein the coupling unit is constituted with a pair of pull rollers which are rotatably installed on the hanger support plate at a distance corresponding to the width of each of the pull blocks.

[c6] The vertical rotary parking system of any of claims 1 through 3, wherein guide ribs are formed on the chain guide rails in their length directions, and the suspension

chain is formed of link pins, link plates in each pair coupled to each other by a link pin, and a roller combined with each of the link pins such as to be moved to the guide ribs.